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Supplementary Table 1 List of molecular markers used in blast resistance genotyping

| Marker used | Gene | Chromosome number | Amplicon size (bp) | Reference |
|-------------|------|-------------------|--------------------|--------------------------|
| RM224 | Pi1 | 11 | 157 | Hittalmani et al. (2000) |
| AP56595# | Pi2 | 6 | 288 | Fjellstrom et al. (2006) |
| Nmsmpi9 | Pi9 | 6 | 168 | Qu et al. (2006) |
| PikhMAS# | Pi54 | 11 | 216 | Ramkumar et al. (2011) |
| YL155/87 | Pita | 12 | 1,042 | Jia et al. (2002, 2004a) |
| RM166 | Pib | 2 | 321 | Fjellstrom et al. (2004) |
| RM3475 | Pitp | 1 | 150 | Barman et al. (2004) |
| RM72 | Pi33 | 8 | 166 | Berruyer et al. (2003) |
| RM5364 | Pi20 | 12 | 148 | Li et al. (2008) |
| RM19818 | Piz | 6 | 275 | Zhou et al. (2006) |
| MSM6 | Pi40 | 6 | 256 | Rama Devi et al. (2013) |
| RM3605 | Pi38 | 11 | 107 | Gowda et al. (2006) |

[#] Allele specific marker

| Supplementary Table 2 | Gene diversity, major allele frequency and |
|-----------------------|--|
| polymorphic in: | formation content of the SSR markers used |

| Supplementary Table 2 Gene diversity, major allele frequency and polymorphic information content of the SSR markers used | | | Marker | Chromosome number | Major allele frequency | Allele no. | GD | PIC | | | |
|--|------------|-----------|--------|-------------------|------------------------|------------|----|--------|---|--------|--------|
| Marker | Chromosome | | Allele | GD | PIC | RM-3708 | 4 | 0.4545 | 3 | 0.2975 | 0.2533 |
| | number | frequency | no. | | | RM-5608 | 4 | 0.7273 | 2 | 0.6405 | 0.5669 |
| RM-1 | 1 | 0.0455 | 3 | 0.9545 | 0.9526 | RM-7472 | 4 | 0.8636 | 2 | 0.3967 | 0.318 |
| RM-292 | 1 | 0.5909 | 2 | 0.5579 | 0.4902 | RM-8213 | 4 | 0.7727 | 2 | 0.2355 | 0.2078 |
| RM-3252 | 1 | 0.8636 | 2 | 0.2355 | 0.2078 | RM-161 | 5 | 0.8182 | 2 | 0.3512 | 0.2896 |
| RM-6073 | 1 | 0.6364 | 2 | 0.4628 | 0.3557 | RM-18614 | 5 | 0.6364 | 2 | 0.2975 | 0.2533 |
| RM-8071 | 1 | 0.8636 | 2 | 0.2355 | 0.2027 | RM-188 | 5 | 0.4545 | 3 | 0.4628 | 0.3557 |
| RM-8145 | 1 | 0.6818 | 2 | 0.4339 | 0.3398 | RM-334 | 5 | 0.4545 | 3 | 0.6281 | 0.5511 |
| RM3475 | 1 | 0.8636 | 3 | 0.2355 | 0.2078 | RM-3486 | 5 | 0.5909 | 2 | 0.6281 | 0.5511 |
| RM246 | 1 | 0.4091 | 2 | 0.657 | 0.5832 | RM-507 | 5 | 0.8182 | 2 | 0.4835 | 0.3666 |
| RM-1358 | 2 | 0.5455 | 2 | 0.4959 | 0.3729 | RM-538 | 5 | 0.8182 | 2 | 0.2975 | 0.2533 |
| RM-174 | 2 | 0.6364 | 2 | 0.4628 | 0.3557 | RM-6229 | 5 | 0.7727 | 2 | 0.2975 | 0.2533 |
| RM-452 | 2 | 0.7273 | 2 | 0.3967 | 0.318 | RM-103 | 6 | 0.8182 | 2 | 0.3512 | 0.2896 |
| RM-530 | 2 | 0.5909 | 2 | 0.4835 | 0.3666 | RM-454 | 6 | 0.5455 | 2 | 0.2975 | 0.2533 |
| RM-5622 | 2 | 0.7727 | 2 | 0.4835 | 0.3666 | RM-5371 | 6 | 0.7727 | 3 | 0.4959 | 0.3729 |
| RM-6942 | 2 | 0.9091 | 2 | 0.3512 | 0.2896 | RM-7551 | 6 | 0.3636 | 2 | 0.3512 | 0.2896 |
| RM166 | 2 | 0.9091 | 2 | 0.1653 | 0.1516 | AP56595 | 6 | 0.6818 | 3 | 0.6612 | 0.5868 |
| RM208 | 2 | 0.7273 | 2 | 0.1653 | 0.1516 | Nmsmpi9 | 6 | 0.5909 | 3 | 0.4339 | 0.3398 |
| 0SR-13 | 3 | 0.5455 | 3 | 0.3967 | 0.318 | RM19818 | 6 | 0.4091 | 2 | 0.5165 | 0.4222 |
| RM-15827 | 3 | 0.5455 | 2 | 0.5826 | 0.5076 | MSM6 | 6 | 0.5909 | 2 | 0.6322 | 0.5541 |
| RM-3350 | 3 | 0.7273 | 2 | 0.4959 | 0.3729 | RM-11 | 7 | 0.9091 | 2 | 0.4835 | 0.3666 |
| RM-338 | 3 | 0.8636 | 2 | 0.3967 | 0.318 | RM-125 | 7 | 0.6364 | 2 | 0.1653 | 0.1516 |
| RM-3654 | 3 | 0.6364 | 2 | 0.2355 | 0.2078 | RM-248 | 7 | 0.8636 | 3 | 0.4628 | 0.3557 |
| RM-489 | 3 | 0.5 | 3 | 0.4628 | 0.3557 | RM-3755 | 7 | 0.4545 | 3 | 0.2355 | 0.2078 |
| RM-514 | 3 | 0.8182 | 2 | 0.5744 | 0.4838 | RM-455 | 7 | 0.6818 | 4 | 0.6074 | 0.5244 |
| RM-7642 | 3 | 0.5 | 3 | 0.2975 | 0.2533 | RM-500 | 7 | 0.5909 | 2 | 0.4752 | 0.416 |
| RM-124 | 4 | 0.7273 | 2 | 0.5744 | 0.4838 | RM-5499 | 7 | 0.6818 | 2 | 0.5826 | 0.5326 |
| RM-307 | 4 | 0.5455 | 3 | 0.3967 | 0.318 | RM-5875 | 7 | 0.7727 | 3 | 0.4339 | 0.3398 |
| RM-317 | 4 | 0.8636 | 2 | 0.5992 | 0.5324 | RM-3383 | 8 | 0.6364 | 3 | 0.3512 | 0.2896 |
| RM-348 | 4 | 0.8182 | 2 | 0.2355 | 0.2078 | RM-408 | 8 | 0.4545 | 2 | 0.5248 | 0.466 |

| Marker | Chromosome | Major allele frequency | Allele no. | GD | PIC | |
|----------|------------|------------------------|------------|--------|--------|--|
| RM-433 | 8 | 0.8636 | 3 | 0.6074 | 0.5244 | |
| RM-44 | 8 | 0.8182 | 2 | 0.2355 | 0.2078 | |
| RM-6976 | 8 | 0.8636 | 3 | 0.314 | 0.2918 | |
| RM-8264 | 8 | 0.7273 | 3 | 0.2355 | 0.2078 | |
| RM-8271 | 8 | 0.5455 | 2 | 0.4174 | 0.3603 | |
| RM72 | 8 | 0.6818 | 3 | 0.562 | 0.4762 | |
| RM-105 | 9 | 0.8182 | 3 | 0.4339 | 0.3398 | |
| RM-160 | 9 | 0.6818 | 3 | 0.314 | 0.2918 | |
| RM-215 | 9 | 0.5 | 3 | 0.4587 | 0.3873 | |
| RM-23788 | 9 | 0.5455 | 2 | 0.5413 | 0.4361 | |
| RM-316 | 9 | 0.9091 | 3 | 0.5331 | 0.4316 | |
| RM-6051 | 9 | 0.6364 | 2 | 0.1653 | 0.1516 | |
| RM-6460 | 9 | 0.6818 | 3 | 0.5289 | 0.4732 | |
| RM-7175 | 9 | 0.5455 | 3 | 0.4339 | 0.3398 | |
| RM-147 | 10 | 0.5455 | 3 | 0.5331 | 0.4316 | |
| RM-171 | 10 | 0.5 | 2 | 0.5331 | 0.4316 | |
| RM-2887 | 10 | 0.6364 | 2 | 0.5413 | 0.4361 | |
| RM-311 | 10 | 0.6818 | 2 | 0.4628 | 0.3557 | |
| RM-3882 | 10 | 0.6818 | 2 | 0.4339 | 0.3398 | |
| RM-4771 | 10 | 0.9091 | 4 | 0.4339 | 0.3398 | |
| RM-484 | 10 | 0.5909 | 2 | 0.1653 | 0.1516 | |
| RM-7492 | 10 | 0.7727 | 2 | 0.5826 | 0.5332 | |
| RM-27318 | 11 | 0.7273 | 2 | 0.3512 | 0.2896 | |
| RM-287 | 11 | 0.6818 | 3 | 0.3967 | 0.318 | |
| RM-3577 | 11 | 0.7727 | 2 | 0.4339 | 0.3398 | |
| RM-536 | 11 | 0.7727 | 2 | 0.3678 | 0.3257 | |
| RM-6272 | 11 | 0.8182 | 2 | 0.3512 | 0.2896 | |
| RM224 | 11 | 0.8182 | 2 | 0.2975 | 0.2533 | |
| Pikh Mas | 11 | 0.7727 | 2 | 0.2975 | 0.2533 | |
| RM3605 | 11 | 0.9091 | 3 | 0.3512 | 0.2896 | |
| RM-512 | 12 | 0.4545 | 2 | 0.1653 | 0.1516 | |
| RM-5568 | 12 | 0.6818 | 2 | 0.6281 | 0.5511 | |
| RM-5746 | 12 | 0.8636 | 3 | 0.4339 | 0.3398 | |
| RM-6265 | 12 | 0.7273 | 2 | 0.2355 | 0.2078 | |
| RM-6296 | 12 | 0.8182 | 2 | 0.4174 | 0.3603 | |
| YL155/87 | 12 | 1 | 2 | 0.2975 | 0.2533 | |
| RM5364 | 12 | 0.8636 | 2 | 0.2355 | 0.2078 | |
| RM1337 | 12 | 0.9091 | 2 | 0.1653 | 0.1516 | |
| Average | | 0.688 | 2.54 | 0.4123 | 0.3462 | |

 $GD, Genetic \ diversity; PIC, Polymorphic \ information \ content.$